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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)

TRAN-P059

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on 12/28/06

Signature _____

Typed or printed name Julie Williams

Application Number

09/694,433

Filed

10/23/00

First Named Inventor

Read, et al.

Art Unit

2115

Examiner

Cao, Chun

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

- ☐ applicant/inventor.
- ☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)

☒ attorney or agent of record.
Registration number 35,295

☐ attorney or agent acting under 37 CFR 1.34.
Registration number if acting under 37 CFR 1.34 _____

Signature

Anthony C. Murabito

Typed or printed name

(408) 938-9060

Telephone number

12/28/06

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☒ *Total of 4 forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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TRAN-P059

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Read, et al.

Serial: 09/694,433

Group Art Unit: 2115

Filed: October 23, 2000

Examiner: Cao, Chun

For: STATIC POWER CONTROL (As Filed)

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Honorable Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the final Office Action dated September 29, 2006 Applicants respectfully request review of the final rejection in the above-identified application. Applicants respectfully submit that the Examiner's rejections of the Claims are improper as an essential element needed for a proper prima facie rejection under 35 U.S.C. §102 and 35 U.S.C. §10 is missing (e.g., the teaching of all of the recited claim limitations).

Claims 1-3, 5-11 and 13 are rejected under 35 U.S.C. §102(e) as being allegedly anticipated by Pole, II et al., U.S. 6,675,304 ("Pole"). Claims 4, 12 and 14-18 are rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Pole in view of Applicants' admitted prior art ("APA") and further in view of "High-speed, Digitally adjusted step-down controllers for notebook CPUs," Maxim, July 2000, pages 1-28 ("Maxim").

CLAIM LIMITATIONS THAT ARE NOT MET BY THE CITED REFERENCES

With respect to independent Claim 1, Pole fails to teach or fairly suggest the limitations “reducing core voltage to the processor to a value sufficient to maintain state during the mode in which system clock is disabled, wherein said value of the core voltage is not sufficient to maintain processing activity in said processor” as recited by Claim 1. While Pole may describe a “a reduction in voltage,” Pole is completely silent as to supplying a voltage “not sufficient to maintain processing activity in said processor” as recited by Claim 1.

In the rejection, the Examiner cites Pole column 1, lines 30-34 as suggesting this limitation. Applicants strongly traverse. The cited passage refers to an external clock signal but fails to suggest changing voltage. The use of hindsight reasoning is not proper and this particular citation indicates that the rejection is guided by the recited claims to establish teachings not present in the cited art.

Elsewhere, Pole may suggest that a voltage may be changed. However, Pole’s voltage teachings are limited to “adjusting” (column 1 line 39), high/low (column 4 lines 18-29), higher/lower (column 4 lines 38-39) and the like. Pole does not teach any functional requirement of a voltage. Importantly, Pole’s relative terms describing voltage fail to teach or fairly suggest the limitation of a voltage “sufficient to maintain state (but) not sufficient to maintain processing activity in said processor” as recited by Claim 1. Applicants assert that a voltage that maintains state and is sufficient to maintain processing activity is consistent with Pole. In contrast, the description of the claimed limitation is not taught or fairly suggested by the cited art.

With respect to independent Claim 5, Pole fails to teach or fairly suggest the limitations “reducing core voltage to the processor to a value sufficient to maintain state during the mode in which system clock is disabled, and transferring operation of a voltage regulator furnishing core voltage in a mode in which power is dissipated during reductions in core voltage to a mode in which power is saved during a voltage transition when it is determined that a processor is transitioning from a computing mode to a mode in which system clock to the processor is disabled” as recited by Claim 5. The limitations are not taught or fairly suggested by the cited art.

Pole is completely silent as to a mode of operation of a voltage regulator. While Pole may teach increasing or reducing voltage, Pole fails to teach or fairly suggest changing modes of operation of the voltage regulator. For example, operating a voltage regulator in the same mode, e.g., linear regulation mode at both “high” and “low” voltages, is completely consistent with the teachings of Pole. Consequently, Pole fails to teach or fairly suggest changing modes of operating the voltage regulator, as recited by Claim 5. The limitation is not taught or fairly suggested by the cited art.

In addition with respect to Claim 5, power savings can be achieved in manners other than reducing frequency and/or reducing voltage of a processor. Applicants have specifically recited in this embodiment that saving power is performed by a choice of mode of operation of the voltage regulator. Pole is silent as to any mode of operation of a voltage regulator. Consequently, Pole is silent as to changing the mode of operation of the voltage regulator in a mode in which power is dissipated to a mode in which power is saved, as claimed. Thus, Pole fails to teach or fairly suggest the claimed transferring the operation of a voltage regulator from a mode in which power is dissipated to a mode in which power is saved, during a voltage transition. These limitations are not taught or fairly suggested by the cited art.

Further with respect to Claim 5, Pole is directed to adding (“switching in”) an impedance when a voltage regulator is at a lower output voltage level (Abstract, column 5 lines 4-18, *inter alia*). In this manner, the load on the regulator is increased, increasing power consumption. Thus Pole trades increased power consumption in exchange for decreased latency in increasing voltage. This teaching leads away from power saving, as recited in Claim 5. These limitations are not taught or fairly suggested by the cited art.

With respect to independent Claim 11, Pole fails to teach or fairly suggest the limitations “means for reducing the selectable voltage below a lowest level the voltage regulator is specified to output” as recited by Claim 11. Pole is completely silent as to operation of a voltage regulator outside of its specified output range. In fact, the teachings of Pole are specifically limited to operation when the outputs of the voltage regulator are “within specifications” (column 4 line 8), which actually teaches away from the cited limitation. Applicants respectfully assert that the whole of Pole is directed to operation of a voltage regulator within its specifications, in contrast to the recited limitations of Claim 11. These limitations are not taught or fairly suggested by the cited art.

With respect to independent Claim 13, Pole fails to teach or fairly suggest the limitations “means for enabling the circuitry for conserving charge stored by the voltage regulator when the selectable voltage decreases” as recited by Claim 13. Pole teaches adding (“switching in”) an impedance when a voltage regulator is at a lower output voltage level (Abstract, column 5 lines 4-18, *inter alia*). In adding such an impedance, charge stored by the voltage regulator is actually dissipated in Pole, in contrast to the recited limitation of conserving charge as recited by Claim 13. In this manner, Pole actually teaches away from embodiments of Claim 13. These limitations are not taught or fairly suggested by the cited art.

With respect to dependent Claim 4, Pole in view of APA and Maxim fail to teach or fairly suggest the limitations “providing a feedback signal to the voltage regulator to reduce its output voltage below a specified output voltage” as recited by Claim 4. The rejection concedes that Pole does not teach providing the recited feedback. While APA may teach “feedback... to raise the output voltage level” (page 10 lines 6-9, emphasis added), APA fails to suggest “reduc(ing)” a voltage level, as recited by Claim 4. Maxim fails to teach feedback or changing an output level to a processor. The rejection confuses the mode of operation of Maxim (“step down” conversion) to allegedly teach changing an output voltage. However, “step down” as used in Maxim refers to accessing a higher input (to the regulator) voltage, e.g., from a 28 volt battery (Maxim page 1), to produce a lower regulator output, e.g., 2 volts.

Applicants respectfully assert that Pole (“no feedback”) in view of APA (“feedback to raise voltage”) actually teaches feedback to raise voltage, thereby teaching away from the recited element. Thus, neither Pole, nor APA nor Maxim, alone or in combination, teach or fairly suggest feedback to reduce regulator output voltage, as recited by Claim 4. These limitations are not taught or fairly suggested by the cited art.

Further with respect to Claim 4, Pole in view of APA and Maxim fail to teach or fairly suggest the limitations “providing a feedback signal to the voltage regulator to reduce its output voltage below a specified output voltage” as recited by Claim 4. As previously presented, Pole is silent as to operation outside of specifications, and actually teaches away from this limitation. APA is silent as to these limitations. Maxim teaches operation within specification, which actually teaches away from these limitations.

Thus, neither Pole, nor APA nor Maxim, alone or in combination, teach or fairly suggest operation below specification, as recited by Claim 4. In fact, two of the references actually teach away from these limitations. These limitations are not taught or fairly suggested by the cited art.

In summary, Applicants respectfully submit that the Examiner's rejections of the Claims are improper as key limitations needed for proper prima facie rejections of Applicants' Claims are not met by the cited reference as outlined above.

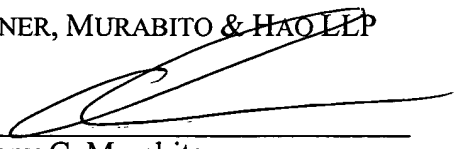
Moreover, because key limitations of independent Claims 1, 5, 7, 11, 13, (from which Claims 2-3, 6, and 8-10 depend) are not taught or fairly suggested by Pole, and key limitations of Claims 4, 12 and 14-18 are not taught or fairly suggested by Pole in view of APA and further in view of Maxim, Applicants respectfully submit that the rejection of Claims 1-18 are improper and should be reversed.

The Commissioner is hereby authorized to charge any additional fees, which may be required for this request, or credit any overpayment, to Deposit Account 23-0085. In the event that an extension of time is required, or may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account 23-0085.

Respectfully submitted,

WAGNER, MURABITO & HAO LLP

Date: 12/28/2006


Anthony C. Murabito
Reg. No. 35,295
Two North Market Street
Third Floor
San Jose, California 95113
(408) 938-9060